

**Remarks of FCC Commissioner Michael O’Rielly
Before CTIA 5G Summit
October 28, 2020**

Good day, everyone. I am Michael O’Rielly of the Federal Communications Commission, and I extend my deepest appreciation to CTIA for inviting me to join you for a few minutes to discuss key wireless issues, specifically the road to 5G. Please accept my regrets that we cannot meet in person, as I have always enjoyed my personal interactions with this knowledgeable audience and found our discussions deeply informative. But, such are the times in which we live, and I wish the best for the health and safety of you and your families.

Many of you may be aware that I am preparing to exit the Commission later this fall. This should not be viewed as sad in any way, as I am, in fact, very excited for what lies ahead. For 27 years, including the last seven at the Commission, I have truly enjoyed serving the American people in various positions within the federal government. Eventually, everyone leaves the Commission by one means or another, so I am happy to leave with all of my faculties intact.

Since this will likely be my last official speech as a public servant, I am going to take the liberty to share insights about me and the approach I took as a Commissioner. For those of you partial to country music, you may recognize a recent song by Rascal Flatts with lyrics that have resonated with me as I contemplate my service and what lies ahead: “You’re gonna leave a legacy, no matter what you do. It ain’t a question of if they will. It’s how they remember you. Did you stand or did you fall?” Powerful stuff.

I’d like to believe that I have always stood tall when faced with efforts to undermine the rights and freedoms of my fellow Americans. For those in the wireless industry, know that I have joined you, hand in hand, to reject unnecessary government intervention in your exceptionally competitive marketplace. The U.S. wireless industry is the envy of the entire world, and it has been a pleasure to work with many of you to help bring new and advanced services to our nation.

But, enough about me. Let’s turn to some of the contentious aspects of the wireless sector.

Spectrum Challenges

Those watching are likely to agree that most recent policy debates involving the wireless industry focus squarely on spectrum. Yes, other issues – such as infrastructure and privacy, etc. – are important too, but spectrum fights have been and continue to be far and away the number one policy issue facing the industry. It’s always about spectrum, spectrum, spectrum. For 5G to fully develop and meet expectations, more spectrum, particularly mid-band, is essential, and the spectrum pipeline of the future won’t fill itself.

It is easy for many of us who closely follow spectrum issues to forget to see the forest for the trees. In other words, we shift our focus from each specific fight to to the next without asking what the fight is really about and why solving the larger, existing spectrum shortage is so critical.

So, let me take a step back for a moment and outline just why we have such brutal battles over every megahertz. The simple truth is because it is the lifeblood of wireless connectivity. This invisible ingredient serves as the proverbial oxygen for every entity – commercial or governmental – seeking to

deliver the benefits that derive from mobile communications. The greatest wireless innovation will sit on the shelf or in an innovator's mind if it doesn't have the proper frequencies in which to operate.

With so great a need for spectrum, there are two basic reasons why obtaining spectrum in the United States is so difficult. First, every highly desired and universally accepted band was already allocated long ago. These frequencies are in use for federal and non-federal purposes, so obtaining the necessary rights requires relocating, sharing with, or terminating access to the existing user. Consider the 600 MHz band once used by America's broadcasters, which was reallocated to wireless services using the Broadcast Incentive Auction. Even as research and development allows us to move further up the electromagnetic spectrum dial, any new bands are being allocated almost immediately by the Commission, leaving a constant hunger for more.

Second, once an entity obtains a spectrum license, it becomes one of its most coveted assets, and the thought of giving it up would be nonsensical. For commercial entities, the market provides a solution. With enough time and effort, and sometimes cajoling, licensees with underutilized spectrum will eventually transfer it to entities that value it for a higher and better purpose. This is precisely what is happening with the soon-to-be initiated C-Band spectrum auction.

Appropriately, this leads us to the real underlying problem. What happens when market forces are not allowed to work or not at one's disposal to clear necessary bands? That's the exact situation we have today with respect to federal spectrum held by a handful of government agencies. Anyone who has worked on spectrum issues over the last two decades knows that federal agencies are currently allocated some of the most coveted mid bands, and there is no adequate incentive that will get these department and agency leaders to readily surrender spectrum. Despite claims that all we need is to offer just one more carrot or strawberry or pot of gold, negotiation is futile. It's been tried, hasn't worked, and won't work in the future. When a federal agency has been given spectrum licenses for free, its leadership has no incentive whatsoever — absent enormous political pressure — to give it back.

As U.S. spectrum policy is set going forward, these hurdles will continue to grow as attempts are made to repurpose the bandwidth needed to support future "Gs" — be it 5G, 6G, or beyond. Nothing is going to be easy. The salad days, as they say, are over; those bands were already repurposed. The Commission, during my time here, has made great strides to free up spectrum, especially over the past few years, both for licensed and unlicensed use. We started with the millimeter waves, considered the spectrum above the 95 GHz bands, and turned to the mid bands, which have been the focus of my attention. Even these bands, which were considered the low-hanging fruit, believe it or not, posed significant challenges.

What I've provided so far is a high-level overview of the policy debate over spectrum and the competing interests involved. While it's easy to describe the crux of the problem, solving it is a separate matter. Practically-speaking, how do we make real progress going forward?

More Commercial Spectrum

As I and others have previously declared, America needs a new spectrum pipeline now. And, since we know there will be challenges in freeing up spectrum to meet future demand, it is high time that we start contemplating possible bands.

I appreciate that CTIA has recently filed some ideas with the Commission. I had asked industry members for possible target bands, so I was thrilled to see someone take me up on my offer. As was the case with 5G spectrum needs, the list contained low-, mid-, and high-band spectrum. Some bands were familiar to me and have been considered in the past, such as low-band spectrum in 1300 to 1350 and 1780 to 1850 MHz and the 25, 42, and 50 GHz millimeter-wave bands. In any case, I hope service providers, manufacturers, and trade associations will look closely at this list and focus on those with the most promise. Federal government agencies should start studying these bands and talking to industry about the current use of these frequencies and how incumbent services can be relocated or protected. While I cannot discuss each and every band in our time allotted, I will highlight some of them.

CTIA has flagged the 7 GHz band, which I have raised in the past and is predominantly used today for federal fixed point-to-point microwave systems, as well as some mobile satellite and meteorological services. With almost 1.3 gigahertz of spectrum between 7125 and 8400 MHz, this band provides ample opportunity for commercial uses. Of course, that does not mean that the entire band can be repurposed, but it absolutely should be studied to see what spectrum can be cleared and, if clearing isn't possible, shared, and in what manner.

CTIA has also targeted the 4 GHz band, including the 4.9 GHz public safety band that was generally opened for commercial leasing at the last Commission meeting. At the time, I predicted that there would be greater interest in that band for 5G if other steps were taken, such as combining that 50 megahertz with other spectrum in the 4400 to 4940 MHz range, which is primarily used by the federal government. While our recent decision may generate limited interest in this band, I am confident that further Commission action will be forthcoming, especially since the item had a rather substantive further notice attached.

Another band on the CTIA list is the 3.1 to 3.55 GHz band. The Commission must vigorously pursue this proceeding. While steps to clear non-federal users from the upper 250 megahertz is a first step, the focus going forward must be on introducing commercial broadband use to the band as quickly as possible. The Commission has sought specific comment on the 3.45 to 3.55 GHz portion to implement the agreement struck by the Trump White House and the Department of Defense to substantially clear the band. But, a second 100 megahertz must also be cleared by DOD, and the remainder must be studied for shared use.

In addition to reallocating spectrum, in some cases, we must fix and, in some cases, tweak rules for bands that have already been approved. For instance, and this list is not exhaustive, the power levels in 3.5 GHz must be raised to increase efficiency and level the playing field with other commercial offerings. Unfortunately, DOD, which committed to taking this up, has not done so yet. The 6 GHz rules likewise need technical tweaks, including facilitating IoT uses by introducing very low power use in the band and making power adjustments for low-power indoor use. And, some final details on 3.7 to 4.2 GHz are being worked out in advance of the C-Band auction this December. I think you get my point on the pipeline: there is much work to be done.

An International Approach

Internationally, I have been actively engaged in protecting U.S. priorities and innovation from other nations that use international organizations like the ITU and standards setting bodies to hinder U.S. progress. These same foreign interests seek to end our leadership in wireless technologies to protect their own incumbent, favored companies and industries. While we managed to get out of the last

World Radiocommunication Conference with only a few nearly mortal wounds, almost immediately after the conference ended, the backward-looking nations turned around and reopened the debate about overly cautious adjacent band protections. The Commission and industry must remain vigilant, watching international developments closely and with a healthy dose of skepticism toward certain nations.

That is not to say that all of our international spectrum fights cannot end peacefully. For years, I have tried to use my seat to aggressively push the international spectrum community towards more sound policy and away from distractions or larger geo-political skirmishes. My hope has always been that, by being so outspoken, I would be in a position to lead a partial renaissance to more enlightened spectrum positions. If Nixon could go to China, why couldn't O'Rielly reach spectrum nirvana? I set out to help spread the word that nations need to design spectrum auctions to be allocation mechanisms and not revenue raisers, to accept the premise that longer license terms can lead to more robust investment, and to stop favoring their home-grown incumbent providers at the expense of innovation and progress. Similarly, I believe we can move away from the zero-sum game and stodgy, old protectionism that persists in our international spectrum debates.

Alas, I didn't quite get the chance to see this through to fruition. However, it is possible that, from my next perch, I will be able to help steer some of the international debates in a more collectively advantageous manner. Certainly, my objectives won't change, but perhaps the tactics will be moderated.

Government Sponsored Wholesale Network: A Bad Direction

Finally, this brings me to the giant elephant in this virtual room: the completely indefensible proposal to create a government-sponsored wholesale wireless network. For the last few years this "idea" has been floated, rejected, floated, rejected, and just recently floated again. Now, it seems to be under consideration once again by some at the highest levels of our government. While I only have a little time to touch upon it today, I'm here to tell you, with all due respect to its proponents — it's a horrible idea that must be dismissed.

Fundamentally, the government should not be allowed to bestow valuable mid-band spectrum to a favored entity to directly compete with the private sector. It flies in the face of every principle of American free enterprise.

Additionally, the justifications for the network are beyond flimsy. The main reason provided is that this is the only way to ensure that every corner of America, especially the rural, unserved areas, can receive wireless service. But, there is zero reason to suggest that any single entity, even a government contractee, would have the means and ability to extend a network to the hardest to reach places, especially when starting from scratch. Wireless dead spots, which are shrinking because of your members' good work, exist because of the extreme terrain and extraordinary cost of deploying in these areas, and there is no evidence that this wholesale network won't have the same problems, especially without any proven track record or relationships with any existing, active wireless tower providers.

It is equally troubling to believe that some think a wholesale model could even work. My conversations with wireless industry participants, and many others who track this industry very closely, suggest that not one existing provider has any interest in being a subscriber. Yet, it would take a tremendous amount of paid traffic to make the economics feasible. Lastly, the notion that this wholesale network —

which would need to have hundreds of partners to make the enterprise work — could be a more secure 5G network than the existing private sector's is preposterous and fails a simple smell test.

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That's a lot of ground to cover in a few moments, and I should probably stop before I risk losing everyone's attention. So, let me thank you for watching today and your friendship over the years. I hope our paths will cross again in the future, and I wish you Godspeed in the meantime.